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(54) Abstract Title
Applicator for tanning and other preparations

(57) An applicator with a reservoir for liquid or cosmetic products, particularly tanning preparations. The applicator dispenses with the need to spread the product by hand. The applicator may incorporate a sponge or absorbent layer 30 and an additional smooth skin contacting layer 34. The applicator may be detachable by means of a spring clip to facilitate cleaning or replacement. The applicator may include a valve 26 which will increase the amount of preparation dispensed when depressed against a bias spring.

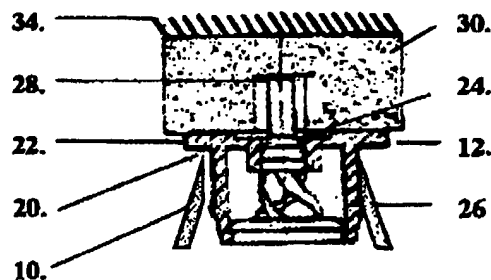


Fig. 1

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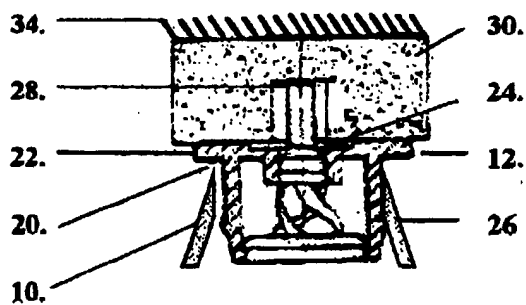


Fig. 1

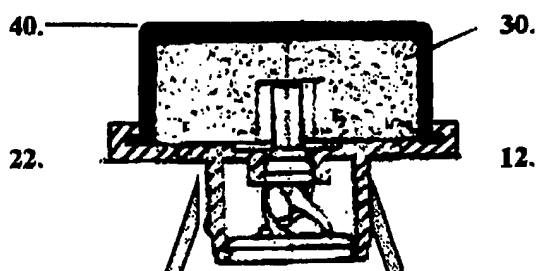


Fig. 2

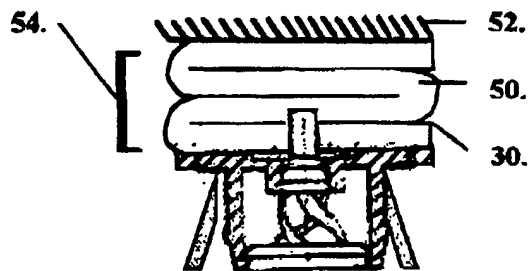


Fig. 3

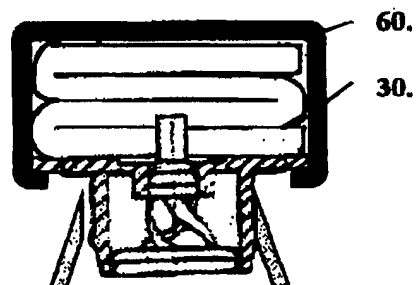


Fig. 4

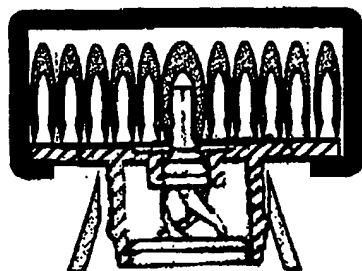


Fig. 4A

APPLICATION OF PRODUCTS TO HUMAN SKIN

This invention relates to application of products to human skin. Particularly, but not exclusively, it relates to application of the self-tanning and sun protection products (which will be referred to herein as "sun care products").

A substantial challenge faced by users when applying sun care products is to ensure that they are applied to the skin in an even coat and that they are well rubbed in to the skin. A consequence of this is that the user's hands typically become covered in the product. This can give rise to uneven and unattractive patterns forming on the user's hands, particularly when the product being applied is a self-tanning product.

One approach to ameliorating this problem is to provide the product in a spray dispenser. However, this is not a completely satisfactory solution because it is very difficult to achieve an even distribution. There is also the added problem that over-spray can cause staining to clothes, carpets and the like. Also the product still needs to be rubbed in by hand thus causing the added possibility of staining the hands.

An aim of this invention is to provide apparatus and a method for applying a liquid or semi-liquid product, such as a sun care product, to human skin while overcoming, or at least reducing, the disadvantages of manual or spray application.

From a first aspect, the invention provides a product applicator comprising a product reservoir and an applicator head, the applicator head having an absorbent body in communication with the reservoir and having a smooth feel when applied to the skin.

Such an applicator can be used to apply the product without a user having to bring their hands into contact with the product. Moreover, the applicator can be used to redistribute product that has been applied to the skin to produce as even a coat as possible.

Ideally, the applicator head incorporates a permeable skin-engaging layer through which the product can be conveyed to the skin, the skin-engaging layer having a smooth feel when applied to the skin. In this case, the skin-engaging layer ensures that the user's skin is not irritated by the applicator.

The absorbent body may include a block of absorbent foam material. When the absorbent body does not come into direct contact with a user's skin, its composition may be chosen principally for its ability to absorb and transport the product. In this case, the absorbent body may be formed from foam material. However, when the absorbent body does come into direct contact with the user's skin the feel of the absorbent body is also important. In this case, the absorbent body may be formed from fine, or extra-fine, cosmetic sponge or a tufted material, such as of lambswool.

Where provided, the skin-engaging layer may be formed from a material such as felt. Advantageously, the material of the skin-engaging layer is less absorbent of the product than the absorbent body. This ensures that the product is transferred efficiently to a user's skin. It is also desirable that the material of the skin engaging layer should offer a minimum of friction to resist movement in contact with a user's skin.

The skin-engaging layer may be constituted by a coating or by a portion of suitable material applied to an outer surface of the absorbent body. For example, the coating may be applied to the absorbent body by adhesive.

Alternatively, it may be applied as a cover that surrounds and is formed separately from the absorbent body. In such embodiments, the cover may advantageously be removable. This can enable a user to change the cover if it becomes worn or damaged.

In an alternative embodiment, the absorbent body and the skin-engaging layer are formed from a composite body having an absorbent core and a surface region suitable to form the skin-engaging layer.

Advantageously, the applicator head additionally comprises a valve that controls flow of product from the reservoir to the absorbent body. For example, the valve may be openable to allow flow of product to the absorbent body by application of pressure to the absorbent body to displace the absorbent body within the applicator head.

From another aspect, the invention provides a packaged product comprising an applicator according to the first aspect of the invention containing a sun care product in the reservoir. The sun care product may be a sun protection product or a self-tanning product.

From a third aspect, the invention provides a method of applying a product to human skin comprising transferring the product from the reservoir to the absorbent body of an applicator embodying the first aspect of the invention, placing the absorbent body into contact with a section of skin, and moving the applicator such that the absorbent body moves in contact with the skin to transfer product to and distribute the product on the skin.

Where the skin-engaging layer is provided this is naturally placed in contact with the section of the skin.

In cases in which the applicator includes a valve, the method includes a step of opening the valve assembly to enable the product to be transferred to the absorbent body. More specifically, where the valve is openable by pressure applied to the absorbent body, the method may further comprise a step of pressing the absorbent body against a region to which product is to be applied in order to transfer the product to the absorbent body.

For a better understanding of the present invention and to show more clearly how it may be carried into effect reference will now made, by way of example, to the accompanying drawings in which:

Figure 1 is a cross-section of part of an applicator being a first embodiment of the invention;

Figure 2 is a cross-section of part of an applicator being a second embodiment of the invention;

Figure 3 is a cross-section of part of an applicator being a third embodiment of the invention;

Figure 4 is a cross-section of part of an applicator being a fourth embodiment of the invention;

With reference first to Figure 1, a first embodiment of the invention is an applicator for applying a composition, such as a sun care composition, to a user's skin. The applicator includes a reservoir 10 and an applicator head 12.

The reservoir 10 is a container that is suitable for holding a volume of liquid sun care composition. The reservoir 10 may be formed of flexible material so that it can be squeezed by the user to aid transfer of the product to the absorbent body, as will be

discussed below. Otherwise, the reservoir 10 is substantially conventional, and will therefore not be described further.

The applicator head 12 comprises a base moulding 20 that is secured on an opening of the reservoir 10 (for example, by screw engagement or tight push fit with a neck of the reservoir 10) for communication with the contents of the reservoir 10. The base moulding 20 includes a plate portion 22 that closes the opening of the reservoir. An aperture 24 extends through the plate portion 22 to communicate with the content of the reservoir 10. A valve assembly 26 is provided to selectively close or open the aperture to prevent or allow flow of liquid through the aperture 24. The valve assembly 26 is normally biased to close the aperture. An operating spigot 28 extends from the valve assembly 26 through the aperture 24. Displacement of the spigot 28 in a direction towards the reservoir 10 causes the valve assembly 26 to open, so that the contents of the reservoir can flow through the aperture 24.

An absorbent body 30 is carried on the plate portion 22 of the base moulding 20. The absorbent body 30 covers the aperture, with the spigot 28 extending into the absorbent body 30. The absorbent body 30 is formed from compressible, absorbent sponge material that can take up and retain a quantity of the content of the reservoir 10.

An outer surface 34 of the absorbent body 30, generally facing away from the plate portion 22, is covered by a permeable skin-engaging layer 34. In this embodiment, the skin-engaging layer 34 is applied as a layer of felt material secured, for example, by adhesive, to the outer surface 32 of the absorbent body 30. The skin-engaging layer 34 has a soft outer surface that can slide smoothly over a person's skin.

For use, a user grasps the reservoir and presses the skin-engaging layer 34 against a surface (typically, a user's skin) to compress the absorbent body 30. This, in turn, displaces the spigot 28 to open the valve assembly 26. The absorbent body 30 becomes loaded with liquid composition from the reservoir 10. If the reservoirs formed of flexible material, this can be assisted by squeezing the reservoir 10. This, in turn, wets the skin-engaging layer 34 with the composition, which can then be applied to a user's skin by drawing the skin-engaging layer 34 over the area to which the composition is to be applied. The smooth nature of the skin-engaging layer ensures that the layer does not cause the user any discomfort.

The following embodiments differ in their construction from that described above, but their method of use is similar and will therefore not be described again.

In the second embodiment, as shown in Figure 2, the skin-engaging layer is formed by a pocket-like cover 40 that is fitted over the absorbent body 30. An opening of the cover, which gives access to its interior, has an elastic neck. The cover 40, is formed of felt material and has a smooth outer surface.

To secure the cover 40 in place on the applicator head 12, the neck of the cover is placed over the absorbent body 30, so that it is disposed within the interior of the cover 40. The neck is dimensioned such that it must be stretched elastically to pass over the absorbent body 30. Once the neck has passed completely over the absorbent body 30, its elasticity retains it behind the plate portion 22 of the base moulding, the elasticity of the neck effectively gripping the absorbent body, so holding the cover 40 in place.

After extensive use, the skin-engaging surface of the cover 40 may become worn, which could result in its becoming less comfortable for the user in use. In this embodiment, the cover can then be removed and substituted by a replacement item.

In the third embodiment, as shown in Figure 3, the absorbent body 30 is formed from a length of wound material 50 such as towelling, or a similar absorbent material with a suitably smooth outer surface to form a skin-engaging surface 52. The wound material is formed into a dense, absorbent body with a generally flat periphery and outer surface 54.

As shown in Figure 4, the fourth embodiment has an absorbent body 30 that is formed from wound material, as is the case in the third embodiment. In this embodiment, the absorbent body is covered by a removable cover 60, similar to that described above with reference to the second embodiment.

As shown in Figure 4A, the fifth embodiment the absorbent body 30 is formed from a tufted (or pile-like) material, such as lambswool, and also has a cover.

An applicator as described above may be used in a product, with its reservoir containing a sun care product such as a sun protection product or a self-tanning product.

7

CLAIMS

Title: Sponge applicator for tanning and other preparations

1. A new and improved applicator which contains a reservoir for liquid cosmetic products and like liquids particularly but not exclusively nail varnish remover, antiseptics and self tanning preparations and applicator head which allows a correct amount of liquid or cosmetic preparation to be applied to the skin.
2. The head applicator regulates the amount of preparation without the need to use hands and distributes the preparation onto the skin without contact.
3. The applicator head incorporates a sponge or an absorbent or tufted layer covered with a smooth feel permeable skin-engaging layer which prevents irritation to the skin and ensures an even spread.
4. The applicator also includes a valve which by pressure will increase or decrease the amount of liquid or preparation being transferred to the skin and ensures that the amount is correct.
5. The applicator head may include absorbent material that adheres to the user's skin.
6. The applicator head as above can also be removed for replacement and/or cleaning.



Application No: GB 0031464.1
Claims searched: 1-4 & 6

Examiner: Jason Bellia
Date of search: 4 April 2002

Patents Act 1977 Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:
UK CI (Ed.T): N/A
Int CI (Ed.7): A47L23/05, A45D34/04, A61M35/00, B65D47/24
Other: ONLINE:EPODOC, WPI, JAPIO

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	GB 2 303 541 A (HAZELGROVE & FOREMAN) See page 5 line 37 - page 8 line 10 & Figures	1-4 & 6
X	EP 0 875 465 A1 (SARA LEE) See column 2 line 38 - column 3 line 8 & Figures	1, 2 & 4
X	EP 0 380 183 A1 (SARA LEE) See Figures	1, 2 & 4
X	EP 0 290 310 A1 (PLOT) See Figures	1, 2 & 4
X	US 6 053 184 (DeVONE) See column 10 line 9-14, column 13 line 1-7 & Figures	1-3 & 6
X	US 5 568 990 (McAULEY) See claim 1 and Figures	1, 2 & 4
X	US 4 993 859 (ASSAD <i>et al</i>) See cloumn 2 line 18 - column 4 line 3 & Figures	1, 2 & 4
X	US 4 225 254 (HOLBERG <i>et al</i>) See column 4 line 33 & Figures	1-4 & 6

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